PROCEEDINGS

OF THE

Hawaiian Entomological Society

Vol. VII, No. 1 For the Year 1927 June, 1928

JANUARY 6, 1927.

The 252nd regular meeting of the Hawaiian Entomological Society was held at the Experiment Station of the H. S. P. A. at 2:30 p. m. Members present besides President Van Zwaluwenburg, who presided, were: Messrs. Bryan, Ehrhorn, Fullaway, Hadden, Illingworth, Mason, Muir, Rosa, Swezey, Willard, and Williams.

The minutes of the 251st meeting were read and approved as corrected. The report of D. L. Crawford, the auditor, of the treasurer's report for the year 1926 was read and accepted.

PAPERS.

Mr. Bryan presented the following paper by title **"Two New Brenthidae in the Bishop Museum Collection,"** by R. Kleine, Stettin, Germany.

NOTES AND EXHIBITIONS

Stictocephala festina (Say).—Mr. Swezey reported collecting specimens of this membracid on *Tribulus cistoides* Dec. 19, 1926 at Barber's Point where it was quite common; two specimens on sugar cane at Puuloa, Dec. 21, 1926; on *Tribulus* and *Lucaena glauca* at Makua, Jan. 1, 1927. These are new records of host plant and also of distribution on Oahu.

Dryophthorus modestus Shp. *on Tree Fern.*—Mr. Swezey reported collecting two specimens of this weevil on tree fern (*Cibotium menziesii*) at Mahena, 1,400 ft. elevation, Maui, Oct. 13, 1926. They were small specimens and were in the rotten bases of dead frond stems. At the time, these were thought to be *pusillus,* a species inhabiting tree ferns on Oahu. While studying up these specimens, he had reexamined a specimen that Mr. Williams collected on tree fern in Kohala Mts., Sept. 28, 1925, and which at the time had been determined by Mr. Swezey as *D. pusillus* (Proc. Haw. Ent. Soc., VI, No. 2, p. 224, 1926). It was a small specimen and in poor condition. The recent examination of it shows it to be *D. modestus* instead of *pusillus*. In fact, it may be possible that all the specimens labelled *pusillus* in any collections here, are only small specimens of *modestus*. Dr. Perkins mentions in the "Fauna Hawaiiensis" II, p. 143, that he had not met with *pusillus*. He further remarks in Proc. Haw. Ent. Soc., I, p. 45, 1906, that the distinctness of *pusillus* from *modestus* seems doubtful.

Engytatus geniculatus Reuter.—Mr. Swezey reported collecting this little mirid bug on tobacco at Makua, Jan. 1, 1927. Nymphs were also present showing that it was breeding on this plant. It is the first time he had found it breeding on anything but tomato plants.

Green Jassid on Amaranth.—Mr. Swezey reported collecting this insect on Datura at Ewa Coral Plain Dec. 19, 1926, and at Makua, Jan. 1, 1927. Nymphs were present in both instances, showing that it is not strictly confined to the amaranths for breeding.

Lariophagus texanus Crawford.—Mr. Swezey exhibited 2 specimens of this imported bruchid parasite which were collected at Makua, Jan. 1, 1927. This indicates that it has become widespread on Oahu.

Plagiomerus hospes Timb.—Mr. Swezey exhibited specimens of this encyrtid, collected Oct. 12, 1926, on koa trees at Mahena, 1,400 ft. at the north end of the West Maui Mts. It is the first record of this parasite from another island than Oahu.

Bruchus amicus Horn.—Mr. Swezey reported collecting this kiawe weevil at Kawailoa, Nov. 22, 1926, Mt. Tantalus, Nov. 28, 1926, and at Makua, Jan. 1, 1927. Thus it is shown that this weevil is now generally distributed throughout Oahu.

Spalangia cameroni Perkins.—The value of this parasite of the hornfly was indicated by a recent observation of Mr. Swezey. He collected a batch of hornfly puparia from cowdung in the Swanzy cow pasture on the lower slope of Round Top hill, Nov. 21, 1926. From these, 10 hornflies issued Nov. 25-26; and 52 of the Spalangia issued Dec. 13-28. This is a parasitism of 84%, and the highest that he had ever found for this parasite.

Eupelmus sp.—A specimen of a female *Eupelmus* was exhibited by Mr. Swezey, collected by him on Kahauiki ridge back of Fort Shafter, Nov. 7, 1926. It had a remarkably long ovipositor (8 mm.) at least twice as long as the body of the insect. Longer than any described species.

**Plagithmysus* n. sp.—A fine specimen of what appears to be a new species of *Plagithmysus* was exhibited by Mr. Swezey. It had issued Jan. 3 from a section of trunk of a dead Sideroxylon tree brought in Nov. 11, 1926 from about 2,000 ft. elevation at the base of Mt. Kaala. Five other specimens had previously issued and have been sent to Dr. Perkins for study. A conspicuous distinction from other species of Plagithmysus on Oahu is that the prothorax is armed with a transverse row of large tubercles towards the posterior margin.

Telenomus nawai Ashm.—Mr. Swezey reported that he had recently received this determination by Mr. Gahan for the egg-parasite in the eggs of *Spodoptera mauritia* discovered at the Exp. Station, H. S. P. A. grounds by Mr. Rosa last October, and which was provisionally being called *Phanurus* sp. Its spread about Honolulu has been previously reported. On Dec. 17, 1926, Spodoptera eggs parasitized by this insect were found on a Ficus tree near the sugar mill at Waipahu. On Dec. 29, 1926 at the Hauula municipal park parasitized Spodoptera eggs were found on leaves of a young kamani tree. The adult parasites themselves were observed at work on several clusters of Spodoptera eggs. These records show this parasite to be already widely distributed on Oahu.

Prosoplus bankii (Fabr.).—Mr. Bryan exhibited grubs and adults of this longicorn beetle, bred from pigeon-pea stems brought to him by Mr. K. O. Moe from the mauka pasture, Kamehameha

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* Description of this beetle under the name *Plagithmysus muiri* is included in a paper by Dr. R. C. L. Perkins in Proceedings of the Hawaiian Entomological Society, VI, No. 3, p. 476, 1927.

Schools, Kalihi, Oahu, Aug. 25, 1926. The stems of many plants were badly infested. The distribution of this immigrant beetle seems to be quite general in Hawaii. It was recorded in the Fauna Hawaiiensis (Vol. 2, page 114) as "on the introduced Acacia (Prosopis sp.)"—meaning the algaroba. Bridwell records the beetle as attacking Euphorbia wood, Crotolaria and klu pods and various leguminous vines (Proc. Hawaiian Ent. Soc. IV, pp. 320, 327). He also describes its parasitism by Sclerodermus wasps (Proc. Hawaiian Ent. Soc. IV, pp. 294, 296). The Bishop Museum has specimens from Napoopoo, Hawaii, 8-9-19, ex Capparis and 8-8-19, ex dead cotton (Swezey); Kealakekua, S. Kona, Hawaii, 8-12-19 (Swezey); Ewa Coral Plain, Oahu, 8-10-19 and 1-29-22 (Bryan); Koko Head, Oahu, 12-20-19, ex Wiliwili pods (*Erythrina monosperma*) (Bryan); Kalihi, Oahu 2-29-22, (Bryan); and Honolulu, 1924, (Cartwright).

Mr. Swezey stated that he had observed the grubs of this beetle in dead stalks of pigeon-peas in his garden. Mr. Fullaway reported getting them from dead citrus.

Termites.—Mr. Ehrhorn made a few remarks about Termites. On December 29, 1926, he found a nest in the basement of the McInerny Building and brought the wood containing them to Mr. Muir for use in nematode work. In this colony the nymphs were plentiful but there were very few soldiers. He placed new wood over the nest so as to attract the termites and show a runway in the soil which was not found at the time. On January 5, 1927 he removed the board from the ground and found a good runway and the termites had eaten quite a large channel in the board—showing their rapid work. On January 4th, the top of a large pepper-tree infested by termites on the old mission property, King and Kawaiahao Sts., was blown off and some of the carton nest had fallen to the ground. Upon investigation, Mr. Ehrhorn found that the stump left standing was at least 8 feet tall and that the entire hollow center was filled with carton nest. Photos were taken and will be shown next meeting. No nymphs were observed.

Melophagus ovinus (Linn.)—Mr. Muir exhibited a specimen of this "sheep tick" which was found by Dr. Lyon on a bag of seeds from Hawaii, December 1926. The seeds were gathered in a strip of forest adjacent to a sheep run in Honohina. This is the first record of finding a specimen of this hippoboscid fly in Hawaii.

Samoan Elateridae.—Mr. Van Zwaluwenburg exhibited a collection of click beetles from Samoa composed of specimens collected by Dr. P. A. Buxton and Mr. G. H. E. Hopkins of the London School of Hygiene and Tropical Medicine, and Messrs. Swezey, Wilder and Bryan of the Bishop Museum staff. Among the material Mr. Van Zwaluwenburg had identified eight genera and fifteen species, including two new genera and six new species. The specimens are being returned to Dr. Buxton and the Bishop Museum.

FEBRUARY 3, 1927.

The 253rd regular meeting of the Hawaiian Entomological Society was held at the usual time and place, with President Van Zwaluwenburg in the chair. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Hadden, Illingworth, Muir, Swezey, and Williams. Mr. H. S. Kemble and Miss Gertrude Henderson were present as visitors.

In the absence of Mr. Willard, Mr. Bryan was asked to act as Secretary. The minutes of the 252nd regular meeting were read and approved.

A memorandum from Mr. Willard, Secretary-Treasurer, reported that he had forwarded to the Zoological Society of London the amount of 5 pounds, 13 shillings, and 9 pence, which represented donations by the members of the Society toward publishing volume 61 of the Zoological Record.

Mr. Bryan was asked to attend to the business of the Secretary and Treasurer during Mr. Willard's absence.

Mr. H. S. Kemble was nominated for membership.

PAPERS.

Mr. Bryan presented a paper by Mr. J. R. Malloch, entitled **"The Hawaiian species of the genus Lispocephala Pokorny (Diptera, Anthomyidae)."**

NOTES AND EXHIBITIONS.

Cryptogonus nigripennis Weise.—Mr. Fullaway exhibited specimens of this lady-beetle from Guam, which had been determined by the Imperial Bureau of Entomology, London. This species is credited with the control of *Aspidiotus destructor* on the coconut palms in Guam.

Lyctoxylon japonum Reitter.—Mr. Swezey reported to have recently determined as this insect, four beetles reared from a bamboo fan by Dr. Lyon, May 13, 1913. No other records of it are known in Hawaii.

Mr. Fullaway stated that he had found lyctids in furniture in Hawaii.

Nesithmysus bridwelli Perkins.—A fine specimen of this longicorn beetle was exhibited by Mr. Swezey. It had issued from Pelea wood brought by him from Mt. Kaala, Nov. 11, 1926. A dying Pelea tree was found at about 3,000 feet elevation. Cutting into it, several large longicorn larvae were found, and pieces of the branches containing these were brought in for rearing. Only the one beetle has matured so far. It was on January 24. The Pelea tree stood in the vicinity of where the only two other specimens of this insect were collected by Messrs. Swezey and Bridwell, July 4, 1916 and July 17, 1917, on ohia lehua and Broussaisia respectively. The host tree of the beetle is now proven.

Ephestia cautella Walker.—A very heavy infestation by this moth of rolled barley in a feed warehouse at Waipahu was reported by Mr. Swezey. He and Mr. Hadden had investigated it December 17, 1926. In looking up the identity of the moth it was found to be the same as a large series in the H. S. P. A. collection under the name *Ephestia elutella.* It is not known how the error in previous identification occurred. *E. elutella* is recorded in the "Fauna Hawaiiensis", and no doubt has occurred here. But it is now apparent that the species that has been known here commonly of recent years, infesting many kinds of cereal products and dried fruits, and known as *elutella,* is *cautella,* the same species that is such a pest in stored products on the mainland. The two species are separated by the male having two subbasal tufts of hair on the hind wings in *elutella,* whereas in *cautella* there is but one.

Termites.—Mr. Ehrhorn showed photographs of the pepper tree with Coptotermes nest, 13 feet long filling its entire stump, which he reported at the last meeting. He also exhibited a piece of wood showing the work of Coptotermes done in 8 days, and a stake which had been in the ground, as a trap, for one month in an infested district. This stake showed a very severe attack, and must have been in soil which was very badly infested with Coptotermes.

Mr. Fullaway exhibited what he thought to be a neoteinic female Coptotermes. Some little discussion followed, because the specimen showed no wing pads.

Mr. Swezey exhibited an as yet unchitinized soldier of Calotermes. There followed a discussion of what were the nymphal stages of a termite, and how the immature stages of soldiers differed from those of other casts.

Mr. Ehrhorn requested that the members try to note the ratio between males and females at the time of swarming termites.

North American Sarcophagidae.—Mr. Bryan exhibited specimens of seven species of these flies, received in exchange for Hawaiian Sarcophagidae from Mr. David G. Hall, of the University of Arkansas.

South Pacific Mosquitoes.—Mr. Bryan exhibited a collection of named mosquitoes from Samoa and other South Pacific groups received at the Bishop Museum from Dr. P. A. Buxton. Part of the specimens had been collected by Messrs. Swezey, Wilder, and Bryan, and had been sent to London with other Samoan material to be worked up in the preparation of an Insect Fauna of Samoa. The rest had been collected by Dr. Buxton and Mr. G. H. E. Hopkins. The collection included a series of microscope slides of larvae and pupae. Among these were specimens of the unique submarine Chironomid fly, *Pontomyia natans* Edwards, discussed by Dr. Buxton in the Proceedings of the Zoological Society of London, 1926, pages 807-814.

Proterhinus samoae Perkins.—Mr. Swezey stated that a letter from Dr. Perkins had contained the news that he had found specimens of this bark beetle in the collections of Buxton and Hopkins from Samoa. The species had been described from a single specimen bred from the woody stem of a coconut imported as seed from

Samoa. As Proterhinus was supposed to be an endemic Hawaiian genus this species was regarded with some doubt by local entomologists. This new find, together with the discovery of Proterhinus on Enderbury Island of the Phoenix group by Mr. Bryan indicates a wider distribution for the genus.

MARCH 3, 1927.

The 254th regular meeting of the Hawaiian Entomological Society was held at the usual time and place, with President Van Zwaluwenburg in the chair. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Hadden, Muir, Pemberton, Rosa, Swezey, Willard, and Williams. There were four visitors present: H. S. Kemble, A. D. Shamel, W. J. Mueller, and Miss G. Henderson.

The minutes of the 253rd regular meeting were read and approved.

Mr. H. S. Kemble was elected to active membership.

Mr. Willard, who did not act as secretary owing to his having to leave early, read a communication from the Zoological Society of London, thanking the Society for their contribution to the Zoological Record.

The order of business was suspended and Mr. Pemberton was asked to speak concerning his two years trip through the East Indies in search of parasites. This he did in a very entertaining manner, relating how he had spent a year in the Philippines searching for parasites of the mole cricket and Rhabdocnemis weevils, and collecting seeds; and how he had then visited Java, Celebes, certain small volcanic islands between Celebes and the Philippines, and North Borneo. In each of these localities he had found much the same general complex of parasites controlling the local species of Rhabdocnemis in the sugar palms and sago swamps.

PAPERS.

Mr. Bryan presented a paper by Prof. D. L. Crawford, on **"The Psyllidae of Fiji and Samoa."**

Mr. Pemberton discussed and later furnished a paper on **"A Thysanuran predatory on eggs and immature forms of termites in Borneo."**

NOTES AND EXHIBITIONS.

Euplectrus platyhypenae How.—Mr. Swezey reported finding this armyworm parasite established at Koko Head, February 22, 1927. This is the first recovery of it on Oahu, outside of the Experiment Station grounds in Honolulu. Of six caterpillars of *Spodoptera mauritia* found, four were parasitized by Euplectrus (66 percent). Of one hundred twelve caterpillars of Cirphis unipuncta collected, fifteen were parasitized (13 percent). He also recovered it on the summit of Punchbowl, February 26th. Only one caterpillar was found (*Spodoptera mauritia*) and it had a cluster of Euplectrus eggs.

**Philodoria lysimachiella* n. sp.—A series of specimens of this beautiful little Tineid moth was exhibited by Mr. Swezey. He had reared them from mines in the leaves of *Lysimachia rotundifolia* collected January 16, 1927, in the Waianae mountains, a little to the south from Kolekole Pass. The injured leaves were quite numerous on a few clumps of bushes found growing near together. Ten specimens were reared out. This appears to be an undescribed species, nearly related to the species mining the leaves of Suttonia, and almost identical with a specimen reared from Lysimachia on Molokai, December, 1925.

Buprestus aurilenta Linn.—Mr. Fullaway exhibited a specimen of this buprestid beetle, which had been picked up on the floor of the Board of Agriculture and Forestry laboratory on King Street. It had undoubtedly issued from specimens of wood. A specimen had also been found in the attic of the Waterhouse home in Nuuanu valley.

Thysanura and Collembola.—Mr. Van Zwaluwenburg stated that Dr. J. W. Folsom had made a report on some Thysanura and Collembola taken in Hawaiian cane-field soil samples. None of them are recorded in the Fauna Hawaiiensis. They are as follows:

1. *Isotomodes* sp. Probably new. This is the species so num-

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Described on page 188 of this issue [Ed.]

erous in cane soils on all the islands of the group. It makes minute pits in tender new roots. Dr. Folsom writes that this a rare and little known genus, interesting because of its generalized structure.

2. *Folsomia* sp. n. near the cosmopolitan *F. funetaria* L. Island of Hawaii.
3. *Acharutes* sp.
4. *Campodea* sp.
5. *Lepidacyrtus* sp.
6. *Entomobrya* (2 spp.).
7. *Smynthurid* probably a new species.
8. *Japyx* sp. Probably new.

Archytas cirphis Curran.—Mr. Williams reported finding this Mexican tachinid in the grounds of the Lihue, Kauai, hotel, on the Lihue plantation, at Kilauea and in the mountains, elevation 2,000 feet, Kauai, during February.

Banana Culture in Central America.—Mr. Shamel gave some informal impressions gained during his investigations of banana raising in Guatamala and other parts of Central America.

APRIL 7, 1927

The 255th regular meeting of the Hawaiian Entomological Society was held at the H. S. P. A. Experiment Station at 2:30 p. m. Owing to the late arrival of the president the meeting was presided over by the vice-president, Mr. E. H. Bryan. Other members present were: Messrs. Fullaway, Hadden, Kemble, Pemberton, Rosa, Swezey, Van Zwaluwenburg, Willard and Williams.

Minutes of the 254th meeting were read and approved as corrected.

PAPERS

"Insect Fauna of *Panicum torridum,* a Native Grass in Hawaii," by O. H. Swezey.

"Nematodes Associated with Termites in Hawaii, Borneo and Celebes," by C. E. Pemberton.

"The Kamehameha Butterfly, *Vanessa tammeamea* **Esch,"** by F. X. Williams.

"The Sphecid Wasp, *Podalonia violaceipennis* **(Lep.)"** by F. X. Williams.

NOTES AND EXHIBITS

Anomala orientalis (Waterhouse).—Mr. Van Zwaluwenburg reported Anomala adults found feeding in Dahlia blossoms in a garden at Pearl City Fruit Company.

Termites.—Mr. Van Zwaluwenburg reported observing a flight of termites on lower Fort Street, March 29, 1927.

Engytatus geniculatus Reuter.—Mr. Fullaway reported observing this bug sucking the flower stems of tomatoes at the U. S. Experiment Station, causing the flowers to fall off and the fruit not to set.

Pseudaonidia clavigera Ckll.—Mr. Fullaway exhibited a twig from a grapevine grown at the U. S. Experiment Station which had been attacked and killed by this scale. He stated that this scale mines under the bark and destroys the tissue.

Fiorinia nephelii Mask.—Mr. Fullaway reported finding this scale on litchi in Honolulu. This being the first time it has been recorded on this host here.

Tricentrus albomaculatus Distant.—A specimen of this membracid was exhibited by Mr. Swezey, collected by him on *Cassia bicapsularis* in Waimea Valley on the north side of Oahu, March 27, 1927. It is the farthest from Honolulu that it has been yet recorded, only having been recorded from Manoa, Tantalus, Honolulu and vicinity.

Archytas cirphis Curran.—Mr. Swezey reported having bred a specimen of this tachinid from *Cirphis unipuncta* collected at Koko Head, February 22, 1927. The fly issued March 28th. It is the first record of breeding this fly from a caterpillar caught in the field.

Banza unica (Perk.).—A specimen of this locustid was exhibited by Mr. Swezey, collected by him on Puu Hapapa, Waianae Mts., Jan. 16, 1927. It has not been previously recorded from the Waianae Range. Specimens have been taken but rarely in the Southeast Koolau Range.

Megaphragma mymaripenne Timb.—Mr. Swezey exhibited a slide mount of two specimens of this minute trichogrammatid, being the only specimens collected since those obtained by Mr. Pemberton at Mountain View, Hawaii, January, 1920, which are the types of the species. The latter were associated with thrips. The present specimens were, also, on a Croton bush at the Experiment Station, H. S. P. A. It may possibly be a parasite on the eggs of thrips.

Aedes albopictus (Skuse).—Mr. Swezey called to attention that Mr. Muir had recently noted in a paper by Edwards (Bull. Ent. Research, XVII, p. 101, 1926) that the day mosquito which we have known as *Stegomyia scutellaris* is *Aedes albopictus*. Points of difference were indicated by Edwards in a previous paper (Bull. Ent. Research, XIV, p. 371, 1924). China or Japan is indicated as the source from which this mosquito came to Hawaii.

MAY 5, 1927

The 256th meeting of the Hawaiian Entomological Society was held at the Experiment Station, H. S. P. A., at 2:30 p. m. President Van Zwaluwenburg presided. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Giffard, Hadden, Kemble, Mason, Pemberton, Rosa, Swezey, Willard and Williams. Prof. S. Inomata of the Agricultural College, Tottori, Japan, was a visitor.

The minutes of the 255th meeting were read and approved.

PAPERS

Mr. Swezey presented the following paper for Prof. Crawford:

"A New Psyllid from Maui."

BY D. L. CRAWFORD

"Biological Notes on Scolopendrella sp., a Pest of Pineapple Roots."

BY J. F. ILLINGWORTH

NOTES AND EXHIBITIONS

Dirhinus giffardii Silvestri.—Mr. Fullaway exhibited a specimen of this fruit fly parasite which was captured by Mr. Ehrhorn on April 29th at the warehouse of the American Factors, Fort and Halekauwila Sts., in Honolulu.

Nutgrass weevil.—Mr. Rosa exhibited a specimen of the nutgrass weevil which was collected in a bunch of nutgrass April 29 that was cut about 20 yds. away from where the original colony was liberated on May 9th, 1925. This is the first recovery of this weevil, and indicates that it has become established.

New Coccinellid.—Mr. Swezey exhibited a minute ladybeetle which he had reared from *Psudococcus filamentosus* (Ckll.) collected on a *Ceratonia* tree at Moanalua, Oahu, March 30, 1927. It seems to be an unrecorded species here. Mr. Fullaway had examined it and found it different from any of the several species that he had introduced for mealybugs in recent years.

New insect records for Hilo.—Mr. Swezey reported that in examining some collections of insects by Hilo school boys, the following were noted that had not been recorded from Hilo or the island of Hawaii:

Anthomyia bisetosa Thoms.
Sybra alternans Wied.
Oxacis collaris Shp.
Ananca sinensis Gemm. (?)

Among these specimens were also some of *Archytas cirphis* Cur., *Scolia manilae* Ashm., and *Notogonidea luzonensis* Rohwer, which have been already known to have become established, and this indicates that they are becoming more common.

Spodoptera exigua (Hüb.).—A caterpillar of this moth was reported by Mr. Swezey as feeding on a flower head of a pink garden Aster. It was burrowing in among the disk flowers and feeding on them. Apparently a new record of food plant for this species in Hawaii.

Chloridea obsoleta (Fabr.).—Mr. Swezey reported the finding of a caterpillar of this moth feeding in an ear of green corn. So far as he knew, this is the first record of its feeding on corn in the Hawaiian Islands.

Lyctus linearis Goeze.—Mr. Swezey called to attention that in a recent letter from Dr. Van Dyke, he pointed out that his identification as *Lyctus linearis,* of some beetles sent from Honolulu and as recorded in Proc. Haw. Ent. Soc., VI, No. 2. p. 242, 1926, was in error. He had made a further study of it and related species on account of more material having been sent him, and finds that *L. brunneus* Steph. is the right name for this beetle. Hence the record given above is to be corrected, and *L. linearis* should be removed from the immigrant list on p. 343.

Coptotermes formosanus Shiraki.—Mr. Swezey quoted from a letter from Mr. S. F. Light, dated Jan. 11, 1927, to the effect that he was working on a paper on the Philippine *Coptotermes,* in which it will be shown definitely that the *Coptotermes* in Hawaii is *formosanus.*

Apterocis vagepunctatus Blkb.—Two specimens of this beetle were exhibited by Mr. Swezey, collected in dead Pelea at Lanipo, Oahu, June 11, 1924. It is a species collected originally by Blackburn in the mountains near Honolulu and none recorded since.

Oodemas insulare Blkb.—A specimen of this beetle was exhibited by Mr. Swezey, collected by him on Puu Hapapa, Waianae Mts., Jan. 16, 1927. It was originally collected by Blackburn and none recorded since.

Derobroscus micans Sharp.—Two specimens of this rare carabid beetle were exhibited by Mr. Swezey, collected by him on Mt. Kaala, Feb. 6, 1927. It was collected originally by Dr. Perkins on the lee side of Waianae Mts. A single specimen is at the Bishop Museum. This genus is strikingly different from other Hawaiian Carabidae. It has only two other species, both on Oahu, and no representatives of them at the Museum.

Nesithmysus forbesii Perk.—Specimens of this cerambycid beetle were exhibited by Mr. Swezey, who had reared them from pieces of Pelea trees brought from Olinda, Maui, Feb. 10, 1927. The larvae were found boring down in the pith from tips of living twigs, and causing their death. Very few Pelea trees were in the region where these were collected, and all seemed to be affected. Some trees 3 or 4 inches in diameter had holes at various places where beetles had issued. The branches had been crippled by the boring of the larvae, but not killed. Four beetles issued from March 21 to April 6. Only the unique type has been previously known. It was collected by Forbes on a Pelea tree at Haipuena, the same general region on the windward side of Haleakala in 1920.

Two specimens of a new species of Nesithmysus near to *N. bridwelli* of Mt. Kaala, Oahu, issued from Mr. Swezey's Olinda material on March 5th and April 1st.

Termites.—Mr. Ehrhorn exhibited specimens of wood (ash) taken out of passenger coaches of the O. R. & L. Railroad which had been attacked by *Cryptotermes piceatus* Sny. These coaches had been treated by dry heat and all of the *C. piceatus* were found dead after one and one-half hours' exposure to 150° F. He explained that the chamber was built large enough to take two freight cars or one passenger coach and that the results of the above treatment were perfect. He showed, also, a piece of timber from a table infested with *C. piceatus* and which had been treated with Paris green about a month previously. Paris green had been blown into an opening in one of the tunnels and when the channels were examined, it was found that the poison had been carried quite a distance by the termites and that all the insects in the table were dead.

Mr. Ehrhorn showed, also, the butt end of a small telephone pole which had been attacked by *Coptotermes.* This exhibit showed how the termites avoided touching any portion of the wood which had been treated with creosote.

Mr. Bryan reported a flight of *Coptotermes* at the University of Hawaii on the evening of May 2, 1927.

JUNE 2, 1927

The 257th regular meeting of the Hawaiian Entomological Society was convened at 2:30 p. m. at the H. S. P. A. Experiment Station. President Van Zwaluwenburg presided and other members attending were: Messrs. Ehrhorn, Fullaway, Kemble, Mason, Rosa, Swezey, Willard and Williams.

The minutes of the last meeting were read and approved as corrected.

The following paper was presented by Mr. Swezey:

"Hawaiian Thysanoptera."

BY DUDLEY MOULTON

NOTES AND EXHIBITIONS

Sybra alternans Wied.—Mr. Swezey reported rearing this longicorn beetle from stems of jack beans from Pearl City Fruit Co. where, on December 11, 1926, Messrs. Muir and Van Zwaluwenburg found a patch of these beans dying, and having coleopterous borer larvae at base of plants. Some pieces of plants were brought in. Feb. 12, one adult *Sybra alternans* issued, proving the species.

Neoclytarlus immundus (Sharp).—Mr. Swezey called to attention that among some specimens of Mr. Giffard's that have recently been studied by Dr. Perkins and returned, there were two specimens of this longicorn beetle. It was described in the genus Plagithmysus by Dr. Sharp, but Dr. Perkins, in a letter of Jan. 9, 1927, has now shifted it to Neoclytarlus.

Schistoceros cornutus Pall.—Mr. Swezey exhibited some branches of Bougainvillea brought in from Schofield Barracks, May 11, 1927, by Mr. McEldowney containing borings of this beetle. From one of the borings two beetles had been taken. The beetles had bored into living branches, entering at the angle above a smaller side branch.

Paratenodera sinensis (Sauss.).—Mr. Ehrhorn reported four instances of this mantis being brought by individuals for identification, two from Manoa, one from Punahou and one from Kaimuki.

Unidentified moth.—Mr. Fullaway exhibited a specimen of an unidentified moth found by Mr. Whitney in leguminous tree seeds imported from New Zealand.

JULY 7th, 1927.

The 258th regular meeting of the Hawaiian Entomological Society was held at the Experiment Station, H. S. P. A., at 2:30 p. m., President Van Zwaluwenburg presiding. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Illingworth, Mason, Rosa, Swezey, Whitney, Willard, and Williams. Noel H. Krauss, student assistant at the Bishop Museum was a visitor.

The minutes of the previous meeting were read and approved.

PAPERS

"Notes on the Tomato Leafminer, Phthorimaea Lycopersicella Busck, in Hawaii."

BY O. H. SWEZEY.

"Zwei neue Brenthiden aus der Sammlung der Exp. Stat. of the Hawaiian Sugar Planters' Association,"

BY R. KLEINE, STETTIN, GERMANY.

"List of Brenthidae in the Collection of the Experiment Station of the Hawaiian Sugar Planters' Association,"

BY O. H. SWEZEY.

NOTES AND EXHIBITIONS

Bactra truculenta Meyr.—Specimens of this nutgrass borer were exhibited by Mr. Swezey, collected by him May 19th at light at Pawaa Junction and June 27 in his garden at 2048 Lanihuli Drive, Manoa Valley. In the latter place the larvae were also found boring in stems of nutgrass. He reported also finding in a patch of nutgrass by the roadside on Manoa hill that about ¼ of the nutgrass stems were infested by larvae of this month. These are the first records of the recovery of this introduced moth anywhere away from the grounds of the Experiment Station, H. S. P. A., where it has been known to be established since January, 1926.

Neotermes connexus Snyder.—Mr. Ehrhorn reported the finding of this termite in koa by Mr. William Meinecke on June 29th, 1927 on Waipa ridge, Lumehai, Kauai, 1,200 to 1,250 feet elevation. He also exhibited eggs of this species which were collected on Tantalus, June 25th, 1927. He stated that adults, and nymphs, and larvae in all stages were found at the same time.

Kalotermes immigrans Snyder.—Mr. Ehrhorn reported also the finding by Mr. Meinecke on June 29th, 1927, specimens of this termite in Kadua stems at the same locality on Kauai which is mentioned above. He mentioned the fact that these specimens were smaller and not quite as stout as true *immigrans* and might be *K. majoriae* Snyder.

Queen cell of termite.—Mr. Ehrhorn exhibited a queen cell found in a kiawe stump at Washington Place, Honolulu, June 16th, 1927; also some carton material found in the same nest and which contained white fungus growths.

Hyposoter exiguae (Viereck).—Mr. Fullaway reported finding this ichneumonid on Molokai, June 28th, 1927.

Samoan insects.—Mr. Bryan exhibited a number of specimens of Samoan insects which had been returned from various specialists where they had been sent for identification. He remarked that several type specimens had been returned.

There was a general discussion on termites and the susceptibility of the tomato to attack by the Mediterranean fruit fly.

AUGUST 4, 1927.

The 259th regular meeting of the Hawaiian Entomological Society was held at the usual time and place, President Van Zwaluwenburg in the chair. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Illingworth, Mason, Rosa, Swezey, and Williams.

In the absence of Secretary and minutes, Mr. Bryan was asked to act as Secretary, and the reading of the minutes was postponed.

Mr. Swezey, reporting for the Outing Committee, asked the members present to express their choice between Waikane-Kahana Trail, Mt. Kaala, and Pupukea Trail, as a locality to visit, and to decide on the date. After some discussion it was decided to visit the Kahana-Waikane region, and Sunday, Sept. 4th was set as the day.

NOTES AND EXHIBITIONS

Notes on Molokai Insects.—Mr. Swezey made some general remarks on a recent field trip to the Molokai mountains with Mr. Bryan, and gave the following first records:

Atractamorpha ambigua Bol.—This grasshopper was collected in a tomato patch at Kainalu, Molokai, July 23rd. It is apparently the first record of its occurance on that island. It has hitherto been known only on Oahu and Kauai.

Lysiphlebus testacipes Cress.—This parasite was reared from a parasitized aphid collected on Phaseolus by the roadside, at Kainalu, Molokai, July 23. It is the first record of the occurrence of this parasite on Molokai.

Mr. Swezey also presented the following list of the trees found infested by the mountain termite, *Neotermes connexus* Snyder:

Straussia, Perrotettia, Metrosideros, Byronia, Coprosma, Freycinetia, Clermontia, Tetraplasandra, Gouldia, Broussaisia, guava and lantana.

In all cases the termites were in dead trunks or branches.

Angitia blackburni (Cam.).—Mr. Fullaway reported that he had bred this parasite from the tomato splitworm, *Phthorimaea operculella* (Zell.).

Termite notes.—Mr. Ehrhorn exhibited specimens of limbs of trees damaged by *Neotermes connexus* and *Kalotermes immigrans.* He is studying the damage done to trees of our forests. He quoted from a letter from Dr. Thos. E. Snyder regarding termite attack on mesquite, which noted that the heartwood of our algaroba which had been sent him was not attacked. *Coptotermes formosanus* does eat the dead heartwood of algaroba, from Mr. Ehrhorn's observations. Ehrhorn also gave the results of a count of winged *Cryptotermes piceatus,* which he had sent to Dr. Snyder, the ratio of which was 27 males to 23 females. He also read a letter on some observations of Snyder on the male and female ratio of adult termites. Ehrhorn reported finding *Kalotermes immigrans* Snyder in dead Lantana on the slopes at Waimanalo bay, above the Makapuu trail.

A discussion of the poisons used in the control of termites brought out the suggestion that Calcium cyanide, which is used against pineapple root insects and other pests, might be effective.

New Moth.—Dr. Williams exhibited specimens of a new Plusia-like moth, which he had reared from Osteomeles, a native plant, on the Palolo side of Manoa Valley. The caterpillars are green with white lines.

Mosquito Trap.—Mr. Ehrhorn spoke concerning the mosquito trap which has been devised by Mr. Wm. Weinrich. The plan of the trap is to entice the mosquito to lay her eggs in a specially prepared tub, which is so arranged that the larvae are trapped. As many as sixty egg masses a day of approximately 200 eggs each, have been laid in some of the tubs.

SEPTEMBER 1, 1927

The 260th regular meeting of the Hawaiian Entomological Society was held at the usual place at 2:30 p. m. President Van Zwaluwenburg in the chair. Other members present were: Messrs. Bryan, Giffard, Kemble, Mason, Rosa, Swezey, Willard, and Williams. Noel H. Krauss, student assistant at the Bishop Museum, and Matsugi Maneki, a student of entomology of the University of Hawaii, were visitors.

The minutes of the July and August meetings were read and approved.

Mr. Swezey reported for the Outing Committee that those who wish to attend the hike and picnic at Waikane, assemble at the Experiment Station, H. S. P. A., at 7:30 a. m., September 4th.

NOTES AND EXHIBITIONS

Bactra truculenta Meyrick.—The spread of this introduced nutgrass borer in Honolulu was reported by Mr. Swezey, who in recent scouting had found it in Manoa Valley as far as Armstrong St.; on the University campus and all across the University farm fields; Bingham Tract; Kuhio School; Territorial Fair Grounds; Makiki Valley at reservoir; U. S. Exp. Station; McKinley High School; Thomas Square; and to the west as far as Kamehameha School grounds. In most places not abundant, but could be readily found by a little search. Sometimes the moths were observed, but usually it was the larva in nutgrass stem showing "dead heart."

**Nutgrass weevil*.—Mr. Swezey reported having recovered an adult and several larvae of this weevil in nutgrass at the U. S. Exp. Station, Aug. 31, 1927. This is the first recovery away from the Exp. Station H. S. P. A. grounds where it was found to have become established in May, 1927. It was introduced at the same time as the nutgrass moth borer, but has been slower in getting established and dispersed. Apparently it will become more efficient in checking nutgrass than the moth for its larva more completely eats the nut than does the moth larva.

Anomala orientalis (Waterh.)—Mr. Swezey recorded the catching of a female beetle of this species which flew into a travelling automobile on the Kamehameha Highway near field 37 of the Oahu Sugar Co., Aug. 14, 1927, at about 6 p. m. It is an illustration of how this pest could be spread, for it is the main travelled highway to the opposite side of the island and traverses for at least 4 miles the region that at one time was badly infested with *Anomala*. The feature that operated against spreading the infestation in this way at that time was that the females of this beetle did very little flying before laying their eggs, as was ascertained from examination of the female beetles whenever caught in flight or at flowers. In the case now mentioned the female contained no eggs.

Nesithmysus bridwelli Perkins.—Mr. Swezey exhibited pieces of wood of Pelea trees containing the larvae of this large cerambycid beetle, collected on Mt. Kaala, Aug. 14, 1927. He also reported finding Pelea trees with numerous large exit holes probably of a similar beetle, on Waipio Ridge, Aug. 28, 1927.

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* This weevil has been named and described as *Athesapeuta cyperi* by Dr. Marshall in Bull. Ent. Research, 18, Pt. 3, p. 268, 1928. [Ed.]

Xiphidiopsis lita Hebard.—Mr. Swezey reported having observed this phasgonurid on the Kuliouou Ridge, Aug. 7; at the H. S. P. A. nursery at Wahiawa, Aug. 17; and on the Waipio Ridge near the forest, Aug. 28. These observations indicate that it is getting widely spread on Oahu, where it was first noticed in Honolulu, Sept. 11, 1923. Mr. Giffard stated that he had captured a female specimen of this species in his garden on the volcano road, island of Hawaii, 3900 ft.

Latrodectes mactans.—Mr. Kemble reported finding two specimens of this poisonous spider which he collected on the Waianae beach, July 31, and August 21, 1927, respectively. Mr. Bryan also exhibited some specimens of this spider from Ewa plantation and stated that the employees of the plantation have reported the spider very numerous in cane trash and under loose pieces of coral rock, on the plantation.

Xylocopa varipuncta Patton.—Mr. Krauss exhibited a specimen of this carpenter bee collected on the Island of Maui. This specimen showed distinct hermaphroditic characters in its coloring. The predominant color was the black of the female, but there was considerable of the orange yellow coloring of the male present. Mr. Krauss left this specimen with the members of the society for examination of the sexual organs for hermaphroditic characters.

Termites.—Mr. Swezey called attention to the frequency with which nymphs of the soldiers were being found in termite nests. He was of the opinion that this was due to more careful searching rather than an increase in abundance of the nymphs.

Carabids.—Mr. Giffard exhibited a number of species of the Cyclothorax group of Carabids from Oahu and Hawaii.

OCTOBER 6, 1927

The 261st regular monthly meeting of the Hawaiian Entomological Society was held at the Experiment Station, H. S. P. A., at 2:30 p. m. President Van Zwaluwenburg presiding and other members present were: Messrs. Bryan, Giffard, Illingworth, Pemberton, Rosa, Swezey, Willard and Williams. Prof. Otto Degener of the University of Hawaii was present as a visitor.

The minutes of the last meeting were read and approved.

Mr. Swezey reported for the committee in charge of the excursion on Sept. 4th, that fourteen persons attended the outing. Most of the party hiked to the top of the ridge back of Kahana valley and a very enjoyable time was had by all of those attending, and interesting insects were collected by several.

PAPERS

"Insect Fauna of the Silversword and Greensword,"

BY O. H. SWEZEY AND OTTO DEGENER

NOTES AND EXHIBITIONS

Carabids.—Mr. Giffard exhibited several boxes containing a number of species of Carabids from Molokai, Lanai and Kauai, together with a large series of the two large species *Barypristus incendiarius* and *B. rupicola* from Hawaii and Maui.

Glyptocolastes bruchivorus Crawford.—Mr. Swezey recorded the breeding of this parasite from *Bruchus limbatus* feeding in seeds of *Acacia confusa* picked from a tree on the campus at the University of Hawaii, Sept. 24, 1927. Of 180 seeds collected, 117 had eggs of the bruchid, 50 had exit holes, and only 13 of the seeds were free from weevil attack—7.2%.

From the infested seeds, 20 bruchids issued and 76 of the parasites, which is an 80% parasitism.

Zorotypus sp.—Mr. Swezey exhibited specimens of this rare insect collected by him in rotten koa log on Waipio Ridge, Aug. 28, 1927, and reported also having secured a specimen in a rotten koa log at about 2600 feet elevation on the trail up Mt. Kaala, Aug. 14, 1927. Comparison had not yet been made to determine whether these were all the same species or whether they were the same as *Z. swezeyi* that occurs in the Waimea plateau on Kauai. He also reported that Dr. Williams had collected this latter species in a rotten lehua stump on the Summit camp trail, Kauai, Feb. 13, 1927. This is a different part of the island from where the insect was already known to occur.

Insects collected at Kahana, Sept. 4, 1927.—Mr. Swezey exhibited the insects of interest that he collected on the ridge above Kahana Valley, Sept. 4th, the day that the Entomological Society had its field day there.

From rotten logs:

14 *Dryophthorus crassus* Shp.
3 " *declivis* Shp.
6 " *modestus* Shp.
3 " *insignis* Shp.

From *Broussaisia*:

9 *Proterhinus phyllobius* Perk., a leafminer.
6 " *swezeyi* Perkins, a large species in dead twigs.
1 *Oodemas aenescens* Boh. in dead twig.
1 *Nesophrosyne* sp., on leaves.

From *Dubautia*:

5 *Gracilaria epibathra* Walsm., a leafminer.

From *Smilax*:

2 *Neoclytarlus* n. sp., reared from dead stems.

Collected at the same place by Mr. Ehrhorn:

3 *Parandra puncticeps* Shp.
2 *Dryophthorus crassus* Shp.
2 " *insignis* Shp.
1 *Oodemas aenescens* Boh.
2 *Bembidium* sp.
1 *Metromenus* sp.

Laboulbenia sp.—Mr. Swezey exhibited two specimens of *Derobroscus* sp., a native carabid, collected by himself and Dr. Williams at Kahana Sept. 4, 1927, both specimens having growths of *Laboulbenia* somewhere on thorax and elytra. This is a host for these peculiar plants, that is not in lists previously recorded.

Bruchid from California.—Mr. Pemberton exhibited several specimens of a Bruchid resembling *Bruchus prosopis* together with an undetermined parasite reared from this material collected at Mecca, California, September, 1927, in seeds of *Prosopis pubescens.*

NOVEMBER 4, 1927

The 262nd meeting of the Hawaiian Entomological Society convened at 2:30 p. m. at the Experiment Station, H. S. P. A., by President Van Zwaluwenburg. Other members attending were: Messrs. Bryan, Ehrhorn, Fullaway, Giffard, Illingworth, Kemble, Mason, Pemberton, Rosa, Swezey, Willard, and Williams. Dr. Thomas E. Snyder of the Bureau of Entomology, Washington D. C., was a visitor.

The minutes of the 261st meeting were read and approved.

The following report of the Executive Committee was read by the secretary and approved by the Society:

"The Executive Committee desires to report that at the request of Mr. W. M. Giffard, and in conformity with paragraph 4, page 60 of the Introduction to his paper entitled a 'Review of the Hawaiian Cixidae with Descriptions of Species' (Homoptera) published in Proc. Haw. Ent. Soc., VI, No. 1, Aug., 1925, it has been decided with the consent of those concerned to place in the permanent custody of the Bishop Museum for study and reference, the types, paratypes and all other specimens included in the descriptions in said paper. The understanding being that the collection as a whole shall remain intact and as arranged by the author but otherwise subject to the control of said Bishop Museum."

The following resolution was presented by Mr. Bryan and unanimously adopted by those present:

The most difficult and time consuming job in connection with the Hawaiian Entomological Society is that of Editor. For a number of years this Society has been very fortunate in having a most efficient and conscientious Editor. In recognition of this continued service to the Society and to science, Be it resolved that the sincere thanks of the Society be extended to Mr. O. H. Swezey, Editor.

The secretary read a notice from a Washington, D. C., paper calling attention to the resignation of Dr. L. O. Howard as Chief of the Bureau of Entomology, and the appointment of Dr. C. L. Marlatt in his place. The notice called attention to the fact that Dr. Howard had been Chief of the Bureau for more than 38 years, and in the employ of the Department for 50 years. Also that Dr. Howard would remain in the Bureau and devote his full energies to the field of entomological research.

Mr. Bryan turned over to the Society the Index to Vol. VI of the Proceedings, which he had prepared. Upon motion by Mr. Ehrhorn, a unanimous vote of thanks was extended to Mr. Bryan for his work in preparing this index.

Dr. Snyder gave a very interesting talk regarding the work of the U. S. Bureau of Entomology with termites, giving special emphasis to the work of the Bureau in having building codes modified in all termite infested areas of the United States, to protect buildings from termite attack. He stated that he had met with unexpected success in this work in the Pacific coast states and that one of the main objects of his visit to Hawaii was to help work out a satisfactory modification of the building code in Honolulu that would meet the termite situation as it exists here.

PAPERS

"Palm seed Scolytids in Hawaii." (Col.),

BY O. H. SWEZEY

"Lice affecting poultry in Hawaii,"

BY J. F. ILLINGWORTH

"Insects collected in the pineapple growing section on the Island of Lanai, August, 1927,"

BY J. F. ILLINGWORTH

NOTES AND EXHIBITIONS

Acrapex exanimis (Meyr.).—Mr. Swezey reported having sent specimens of the moth which he had reared from *Panicum torri-*

dum, collected at Koko Head Feb. 22, 1927, and which he had previously considered a new immigrant near to *Sesamia inferens,* to Mr. E. Meyrick, who had identified them as *Caradrina exanimis,* described by him in the Fauna Hawaiiensis, from a single female collected in Kona, Hawaii. Two specimens sent had been compared with the type at the British Museum by Mr. Tams. There it had been placed by Hampson in the genus *Acrapex* which is near related to *Sesamia.* It is the first time that this moth has been collected since the original specimen collected by Dr. Perkins in Kona, Hawaii, in 1892. It is possible that it may be attached to the native grass (*Panicum torridum*) from which it has now been reared.

Curinus coeruleus Muls.—Mr. Swezey exhibited a specimen of this ladybeetle taken on leaf of coconut palm at Pier 12, Honolulu, November 2, 1927. The leaf was badly infested with *Chrysomphalus aonidum,* on which the ladybeetle probably had fed. This indicates that it is capable of maintaining its existence even though the mealybug, *Pseudococus nipae,* for which it was introduced, has entirely disappeared.

Celerio perkinsi Sw.—Mr. Swezey reported that a specimen of this rare sphingid was captured by Mr. Maneke on the Kahana Trail, Sept. 4, 1927.

Bactra truculenta Meyr.—Mr. Van Zwaluwenburg reported that Mr. Pemberton and he found the larvae of this moth-borer of nutgrass (*Cyperus rotundus*) very abundant at several points in the vicinity of Waialua, on Oct. 10. Three days later in scouting along the government road around the island he found the work of the larvae at: (1) the Waialee Boys' Industrial School; (2) about 3.5 miles west of Kahuku post-office; (3) half a mile south of Laie; and (4) about half a mile north of the old sugar mill at Kualoa. At the Boys' School and Kualoa the moth was fairly numerous, especially at the latter point where both larvae and pupae were found. No trace of this insect could be found in the immediate vicinity of Kahuku. This brief survey indicates that the moth is now generally spread over the island of Oahu since its introduction from the Philippines and release in 1925.

Old Photographs of Prominent Entomologists.—Mr. Giffard exhibited a number of photographs of prominent entomologists which had been presented to him from the effects of the late Albert Koebele. These photographs were of very great interest to the Society and included pictures of Dr. L. O. Howard, showing him as he appeared about the time of his graduation from college, William H. Ashmead, C. V. Riley, W. M. Maskell, W. W. Froggatt, Henry Tryon, and others. Mr. Giffard suggested that a collection of photographs of the early members of the Hawaiian Entomological Society should be made. It was the opinion of those present that such a collection would be of much interest and very valuable. Mr. Giffard was requested to get as complete a collection of these photographs as possible.

Lactrodectes mactans.—Mr. Willard exhibited a specimen of this poisonous spider, and a centipede 5½ inches long upon which the spider was feeding when captured at 213 Kaiulani Ave., Waikiki, Nov. 3, 1927. The spider had spun an irregular and loosely woven web beneath an automobile standing in a garage. The meshes of the web were one inch or more across. It is probable that the centipede had fallen from the automobile into the web and become sufficiently entangled to enable the spider to capture it. When first observed, the centipede was hanging free from the floor at the end of a strong silken cord attached to its head, with its legs securely bound down by numerous silken threads. The fact that a spider of this size was able to capture and kill a centipede 5½ inches long for food is unusual.

Trimicra lateralis Grims.—Dr. Williams exhibited two specimens of a limnobiid fly taken on his lanai in Manoa valley, Honolulu, Oct., 1927. It was later identified by Swezey and Williams as *Trimicra lateralis* Grims. which is represented in the Fauna Hawaiiensis by only two specimens, taken over thirty years ago at two widely separated localities on the island of Hawaii.

The insect is comparatively large and sturdy as far as Hawaiian limnobiids go and is peculiar for its erect-hairy legs.

Latrodectes mactans. (Hour-glass Spider).—Dr. Illingworth collected this poisonous spider in the pineapple fields on the island of Lanai. It is usually found in dark corners about outbuildings. Specimens were taken in the fertilizer shed, in water boxes at the tanks, and in old pineapple stumps among the dried leaves. This latter situation seems rather peculiar for these spiders. Yet Dr. Illingworth previously reported them in old pineapple plants at Waianae, and he collected them from behind the dried leaves of sugar cane in Queensland.

Family Agromyzidae, Milichiella spp.—Dr. Illingworth exhibited two species of flies which probably belong to this genus. These flies are shiny black with light colored wings, similar to *Milichiella lacteipennis* (Loew). One species collected feeding on ripe pineapple on the island of Lanai, has conspicuous white halteres and a narrow white band on the dorsum of the abdomen. The other has been previously reported by Swezey, numerous about a compost heap at the H. S. P. A. Experiment Station. Dr. Illingworth found swarms of these flies at the greenhouses at the University of Hawaii. They probably came from the refuse heap nearby, where all sorts of rubbish is dumped. The females have a broad abdomen, conspicuously silver white above. The bodies of the males are pure black.

DECEMBER 1, 1927

The annual meeting, making the 263rd regular meeting of the Hawaiian Entomological Society, was called to order at 2:30 p. m. at the H. S. P. A. Experiment Station by President Van Zwaluwenburg. Other members present were: Messrs. Bryan, Ehrhorn, Fullaway, Giffard, Hadden, Illingworth, Mason, Pemberton, Rosa, Swezey, Willard, and Williams. Mr. E. P. Mumford was a visitor.

The minutes of the 262nd meeting were read and approved as corrected.

The treasurer read his report for the year, December 2, 1926, to December 1, 1927, showing receipts of $269.65, and expenditure of $20.37, leaving a balance on hand of $249.28. This report was approved and Mr. D. T. Fullaway was appointed by the president to audit the treasurer's accounts.

The secretary read a letter from Mr. J. K. Butler, secretary of the Hawaiian Sugar Planters' Association, notifying the society that his association had approved the payment of a bill in the amount of $658.88, which covered the cost of printing the Proceedings of the Hawaiian Entomological Society for 1926. Upon motion by Mr. Giffard it was voted that the secretary write a letter of thanks to the Hawaiian Sugar Planters' Association for their continued generous financial assistance.

Upon motion by Mr. Bryan, seconded by Mr. Ehrhorn, Mr. E. P. Mumford was nominated for active membership in the society.

Mr. Giffard reported that he was making good progress in collecting photographs of early members of the Hawaiian Entomological Society.

The following officers were elected for 1928:

President—E. H. Bryan, Jr.
Vice-President—O. H. Swezey.
Secretary-Treasurer—H. F. Willard.
Executive Committee—{W. M. Giffard. F. X. Williams.}

PRESIDENTIAL ADDRESS

*"The Interrelationships of Insects and Round Worms,"

BY R. H. VAN ZWALUWENBURG.

PAPERS

"Some new Species of Lepidopterous Leafminers in Hawaii."

BY O. H. SWEZEY.

Mr. Swezey presented also the following papers:

"New Species of Hawaiian Lepidoptera,"

BY EDWARD MEYRICK, MARLBOROUGH, ENGLAND.

"X-rays on Termites,"

BY D. L. CRAWFORD.

"Bees of the Genus Perdita in the J. C. Bridwell Collection,"

BY P. H. TIMBERLAKE, RIVERSIDE, CALIF.

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*Published as Bulletin of the Experiment Station, H. S. P. A., Ent. Series, No. 20, January, 1928.

Notes on Proterhinus (Coleoptera)

BY DR. R. C. L. PERKINS.

NOTES AND EXHIBITIONS

Hister bimaculatus L.—Dr. Illingworth found this histerid abundant in refuse from the pineapple canneries on Maui, Nov. 10, 1927. It evidently was doing much to check the hordes of maggots, nitidulids, and other pests, that normally breed in such waste material.

Longan insects.—Mr. Fullaway exhibited secimens of a scolytid beetle and a pyralid moth reared from seeds of the Longan (*Nephelium longanum*) taken out of fruit gathered on the tree. The moth is *Dichocrocis punctiferalis* (Guen.) a common species in the Oriental region. It was taken once in quarantine at Honolulu, the immature stages infesting a five-leaved pine on an Oriental steamer. In the longan the worm is a borer; after feeding extensively in the pulp it enters the seed and pupates in the cavity which it excavates. The beetle is an unidentified species developing in large numbers within infested seeds. The infestation occurs at the stem-bud.